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10/578,532	05/02/2006	Jian Zhao	USP3348C/SZ119-XCA	9484
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Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary

Application No.

10/578,532

Applicant(s)

ZHAO ET AL.

Examiner

LUKE E. KARPINSKI

Art Unit

1616

Period for Reply -- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 29 October 2008.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-5 and 14-19 is/are pending in the application.
- 4a) Of the above claim(s) 1-5 is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☐ Claim(s) 14-19 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
- Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☒ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) ☐ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO/CDC)
- 4) ☐ Interview Summary (PTO-413)
- 5) ☐ Notice of Informal Patent Application
- 6) ☐ Other: _____
- Paper No(s)/Mail Date _____

DETAILED ACTION

Receipt of amendments, arguments, and remarks filed 10/29/2008 is acknowledged.

Claims

Claims 6-13 are canceled.

Claims 1-5 and 14-19 are currently pending.

Claims 1-5 are withdrawn.

Claims 14-19 are under consideration in this action.

Rejections

Rejections and/or objections not reiterated from previous office actions are hereby withdrawn. The following rejections and/or objections are either reiterated or newly applied. They constitute the complete set presently being applied to the instant application.

New Rejections

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

The factual inquiries set forth in *Graham v. John Deere Co.*, 383 U.S. 1, 148 USPQ 459 (1966), that are applied for establishing a background for determining obviousness under 35 U.S.C. 103(a) are summarized as follows:

1. Applicant Claims
2. Determining the scope and contents of the prior art.
3. Ascertaining the differences between the prior art and the claims at issue, and resolving the level of ordinary skill in the pertinent art.
4. Considering objective evidence present in the application indicating obviousness or nonobviousness.

This application currently names joint inventors. In considering patentability of the claims under 35 U.S.C. 103(a), the examiner presumes that the subject matter of the various claims was commonly owned at the time any inventions covered therein were made absent any evidence to the contrary. Applicant is advised of the obligation under 37 CFR 1.56 to point out the inventor and invention dates of each claim that was not commonly owned at the time a later invention was made in order for the examiner to consider the applicability of 35 U.S.C. 103(c) and potential 35 U.S.C. 102(e), (f) or (g) prior art under 35 U.S.C. 103(a).

1. Claims 14 and 18 are rejected under 35 U.S.C. 103(a) as being unpatentable over US Patent No. 4,938,958 to Niira, deceased et al.

Applicant Claims

Applicant claims a method for preparing an antibacterial agent containing high-valence silver comprising the steps of: adding a solid carrier to a solution containing high-valence silver, stirring said solution to yield a solid compound, and filtering and drying said solid compound, wherein the volume to volume ratio of said solid carrier and said solution is 1:6 to 1:10.

Further claimed by the applicant is a method for preparing said solution containing high-valence silver comprising dissolving silver peroxide into persulphate or nitric acid, several solid carriers, ranges for the pH, time and temperature during the reaction of carrier and silver solution, and a calcinating step with ranges for the time temperature and particle size recovered.

Determination of the Scope and Content of the Prior Art
(MPEP §2141.01)

Niira et al. teach methods for producing antibiotic zeolites (abstract), which reads on inorganic antibacterial agents, containing divalent silver ions (col. 2, lines 11-40), comprising the steps of: adding the zeolite to a solution containing silver ions (col. 2, lines 58-64), stirring said solution (col. 5, lines 54-56), and filtering and drying the solid composition (col. 5, lines 56-60) as claimed in claim 14.

Niira et al. further teach washing the reaction product and drying said product at 110°C, as pertaining to claim 18.

Ascertainment of the differences between the prior art and the claims

(MPEP 2141.01)

Niira et al. do not explicitly disclose an embodiment of the method as claimed in claim 14. However, Niira et al. do teach methods of producing antibiotic materials as well as all of the instantly claimed steps.

Further Niira et al. do not teach the solid carrier to silver solution volume ratio as claimed in claim 14. However, Niira et al. do teach that the solid carrier is added to the silver solution as well as specific weights of carrier added, specific concentrations of said solutions, and specific percentages of silver present in said carrier of the finished product (col. 3, second paragraph and col. 5).

Niira et al. also do not teach the reaction product having a specific pH or a time period for drying said reaction product, as claimed in claim 11. However, Niira et al. do teach that the reaction product is washed until almost no ions remain and that the product is then dried at the same temperature as instantly claimed.

Finding of prima facie Obviousness Rational and Motivation

(MPEP 2142-2143)

It would have been obvious to one of ordinary skill in the art at the time the claimed invention was made to perform the methods as instantly claimed because Niira et al. suggests that the instant method steps can be combined. In a prior art reference it is not necessary for all of the possible compositions to be exemplified in order for the art to render an invention obvious.

Regarding claim 14, it would have been obvious to one of ordinary skill in the art at the time the claimed invention was made to perform the method of producing a silver antibiotic agent found from col. 2, line 58 to col. 3, line 61 of Niira et al. with the steps of stirring the solution and filtering the product, as taught by Niira et al. in the method found in col. 5, lines 43-61 in order to practice the method of instant claim 14.

One of ordinary skill in the art would have been motivated to combine these steps because both methods teach to making silver antibiotic agents through ion exchange and stirring liquid reactants and filtering solid products are basic chemistry techniques. Therefore it would have been obvious to utilize the stirring and filtering steps of one method, with the other method in order to promote ion exchange through stirring and easily collect the product by filtering the reaction mixture.

Further regarding claim 14, it would have been obvious to one of ordinary skill in the art at the time the claimed invention was made to utilize the claimed solid carrier to silver solution ratio in order to practice the method of claim 14.

One of ordinary skill in the art would have been motivated to utilize said ratio because the ratio is simply an amount of solid to add to a liquid, with no concentration requirements. The only requirement is that the solution is capable of being stirred after the addition. One of ordinary skill in the art would have known to add enough solid carrier to react with the amount of silver in the silver solution and to have the silver solution at a concentration dilute enough, that is comprising enough liquid, so that the addition of the solid carrier still rendered the solution capable of being stirred and fluid enough as to not hinder the ion exchange process, especially in light of the fact that

Nira et al. teach specific amounts of solid and liquid to add in order to obtain a slurry and teach the percentage of silver present in the final product that said slurry will provide. Therefore it would have been obvious to utilize the claimed ratio in order to promote ion exchange.

Regarding claim 18, it would have been obvious to one of ordinary skill in the art at the time the claimed invention was made to wash the product material until a pH of 5-6 was reached and to dry said product material for 1-2 hours.

One of ordinary skill in the art would have been motivated to wash the product material until a pH of 5-6 was reached because Niira et al. teach that the product is washed until almost no ions remained, thus leaving only the product material. Since the product material of Niira et al. and the filter cake of the instant invention are the same the materials would necessarily have the same pH after filtering and washing said materials. The office does not have the facilities to test that both materials would have the same pH and it is therefore incumbent upon the applicant to show that the materials do have a different pH. Therefore it would have been obvious to wash the filter material till a pH of 5-6 is reached.

One of ordinary skill in the art would have been motivated to dry the product material for 1-2 hours because Niira et al. teach that the product material is "dried" and teaches a temperature within the claimed temperature range. The term "dried" is read as essentially all liquid being removed. Since the methods of Niira et al. are the same as in the instant invention and therefore all of the solutions and compounds are the same the drying process would necessarily take 1-2 hours. Further, one of ordinary skill

in the art would have understood what the term dry means and be able to determine the appropriate amount of time to expose said product material to a temperature of 110 degrees in order to dry said product. Therefore it would have been obvious to dry the product material for 1-2 hours.

From the teachings of the reference, it is apparent that one of ordinary skill in the art would have had a reasonable expectation of success in producing the claimed invention. Therefore, the invention as a whole would have been prima facie obvious to one of ordinary skill in the art at the time the invention was made, as evidenced by the references, especially in the absence of evidence to the contrary.

2. Claim 15 is rejected under 35 U.S.C. 103(a) as being unpatentable over US Patent No. 4,938,958, to Niira et al. in view of US Patent No. 5,017,295 to Antelman.

Applicant Claims

Applicant claims are delineated above

Determination of the Scope and Content of the Prior Art (MPEP §2141.01)

The teachings of Niira et al. are delineated above and incorporated herein. In particular Niira et al. teach bivalent silver (col.2, lines 16-18 and 39-40) and utilizing nitric acid to help dissolve the silver compounds (col. 5, line 47) as claimed in claim 15.

***Ascertainment of the Difference between Scope the Prior Art and the Claims
(MPEP §2141.012)***

Niira et al. do not teach dissolving silver peroxide in persulphate as claimed in claim 15. This deficiency in Niira et al. is cured by Antelman. Antelman teaches making a divalent silver solution by dissolving silver(II)oxide, a synonym for silver peroxide, in various acids (col. 1, line(s) 61-63).

***Finding of Prima Facie Obviousness Rational and Motivation
(MPEP §2142-2143)***

Regarding claim 15, it would have been obvious to one of ordinary skill in the art at the time the claimed invention was made to combine the methods of producing silver antibiotic materials of Niira et al. with the step of producing a divalent silver solution, as taught by Antelman in order to produce the invention of instant claim 15.

One of ordinary skill in the art would have been motivated to do this because Niira et al. teach bivalent silver solutions and Antelman teaches a known method to produce bivalent silver solutions. Therefore it would have been obvious to utilize the bivalent silver solution production method, of Antelman, with the antibiotic material production of Niira et al. in order to utilize known methods of supplying a bivalent silver solution for the production of bivalent silver antibiotic materials.

From the teachings of the reference, it is apparent that one of ordinary skill in the art would have had a reasonable expectation of success in producing the claimed invention. Therefore, the invention as a whole would have been prima facie obvious to

one of ordinary skill in the art at the time the invention was made, as evidenced by the references, especially in the absence of evidence to the contrary.

3. Claims 16, 17, and 19 are rejected under 35 U.S.C. 103(a) as being unpatentable over US Patent No. 4,938,958 to Niira et al. in view of US Patent No. 5,441,717 to Ohsumi et al.

Applicant Claims

Applicant claims are delineated above.

Determination of the Scope and Content of the Prior Art

(MPEP §2141.01)

The teachings of Niira et al. are delineated above. In particular Niira et al. teach zeolite as a carrier (abstract), as claimed in claim 16, and a temperature of 40°-60° (col. 5, line 54), a reaction time of 3-24 hours (col. 2, lines 67-68), and a pH value from 3-10 and 5-7 and that an acidic pH is important to prevent silver oxide from depositing on the carrier (col. 3, lines 1-4), as claimed in claim 17.

Ascertainment of the Difference between Scope the Prior Art and the Claims
(MPEP §2141.012)

Niira et al. do not teach phosphates as claimed in claim 16. This deficiency in Niira et al. is cured by Ohsumi et al. Ohsumi et al. teach silver ion exchange with

zeolites (col. 1, lines 50-53) and phosphates, including sodium zirconium phosphate (col. 3, line 52).

Further, Niira et al. do not teach altering the pH range with NaOH or KOH as claimed in claim 17. This deficiency is cured by Ohsumi et al. Ohsumi et al. teach that NaOH is utilized to alter the pH range a solution (col. 5, lines 30-31). Niira et al. also do not teach a pH range as acidic as claimed in claim 17, however, Niira et al. do teach that the pH range is preferably acid to prevent silver oxide deposition.

Niira et al. also do not teach a calcinating step. This deficiency in Niira et al. is cured by Ohsumi et al. Ohsumi et al. teach achieving chemical and physical stability by heating the product to 700-900 degrees for 1-20 hours (col. 6, line 52 to col. 7, line 5), as claimed in claim 19.

Finding of Prima Facie Obviousness Rational and Motivation

(MPEP §2142-2143)

Regarding claim 16, it would have been obvious to one of ordinary skill in the art at the time the claimed invention was made to practice the methods of Niira et al. with either a zeolite or phosphate as the solid carrier, as taught by Ohsumi et al. in order to practice the invention of instant claim 16.

One of ordinary skill in the art would have been motivated to utilize either material because Ohsumi et al. teach that they are functional equivalents as silver ion carriers. Therefore it would have been obvious to utilize the zeolite or the phosphate as

taught by Ohsumi et al., with the methods of Niira et al. in order to utilize other carrier materials without changing the function of the product.

Regarding claim 17, it would have been obvious to one of ordinary skill in the art at the time the claimed invention was made to modify the pH values of the methods of Niira et al. as taught by Niira et al. in order to prevent deposition of Silver oxide on the carrier.

One of ordinary skill in the art would have been motivated to modify the pH value of the solution to a more acidic value because Niira et al. teach that an acidic value is required to prevent silver oxide deposition. Therefore it would have been obvious to utilize a more acidic pH value as taught by Niira et al. in order to prevent silver oxide deposition on the carrier.

Regarding claim 17, it would have been obvious to one of ordinary skill in the art at the time of the invention was made to utilize NaOH in order to alter the pH value.

One of ordinary skill in the art would have been motivated to modify the pH value of the solution with NaOH because Ohsumi et al. teach that NaOH may be utilized to alter the pH value of a solution while practicing similar methods. Therefore it would have been obvious to utilize NaOH to alter the pH in order to remain within an optimum pH range.

From the teachings of the reference, it is apparent that one of ordinary skill in the art would have had a reasonable expectation of success in producing the claimed invention. Therefore, the invention as a whole would have been prima facie obvious to

one of ordinary skill in the art at the time the invention was made, as evidenced by the references, especially in the absence of evidence to the contrary.

4. Claims 14-19 are rejected under 35 U.S.C. 103(a) as being unpatentable over US Patent No. 5,441,717 to Ohsumi et al. in view of US Patent No. 5,017,295 to Antelman.

Applicant Claims

Applicant claims are delineated above

Determination of the Scope and Content of the Prior Art (MPEP §2141.01)

Ohsumi et al. teach a method of preparing inorganic antibacterial compounds containing silver (abstract), adding a solid carrier, capable of ion exchange, to a solution containing silver, stirring said solution to form a solid, and filtering and drying said solid (col. 5, line 49 to col. 6, line 17), as claimed in claim 14.

Ohsumi et al. further teach dissolving a silver salt into nitric acid to prepare the silver solution (col. 7, lines 31-35) as pertaining to claim 15, sodium zirconium phosphate and zeolite as the solid carrier (col. 11, example 4, and col. 1, lines 50-53 respectively), as claimed in claim 16, washing and drying the solid product at 110 degrees (col. 5, line 49 to col. 6, line 17), as pertaining to claim 18, and firing said compound from 700-900 degrees (col. 6, line 53 to col. 7, line 5) and said product

having a size range from 1-2 microns (col. 12, comparative example 3) as pertaining to claim 19.

***Ascertainment of the Difference between Scope the Prior Art and the Claims
(MPEP §2141.012)***

Ohsumi et al. do not teach high valence silver as claimed in claim 14. This deficiency in Ohsumi et al. is cured by Antelman. Antelman teaches that divalent silver is more active as a bactericide than monovalent silver (abstract).

Further, Ohsumi et al. do not teach any production methods of bivalent silver compounds as claimed in claim 15. This deficiency is cured by Antelman. Antelman teaches that stable bivalent silver compounds can be produced by reacting a silver oxide (which reads on silver peroxide) with various acids (col. 1, lines 61-63).

***Finding of Prima Facie Obviousness Rational and Motivation
(MPEP §2142-2143)***

Regarding claim 14, it would have been obvious to one of ordinary skill in the art at the time the claimed invention was made to produce the antibacterial silver compounds of Ohsumi et al., with bivalent silver, as taught by Antelman in order to practice the invention of instant claim 14.

One of ordinary skill in the art would have been motivated to do this because Antelman teaches that bivalent silver is a better antibacterial agent than monovalent silver. Therefore it would have been obvious to utilize the bivalent silver of Antelman,

with the antibacterial production methods of Ohsumi et al. in order to produce a more active antibacterial product.

Further regarding claim 14, it would have been obvious to one of ordinary skill in the art at the time the claimed invention was made to utilize the claimed solid carrier to silver solution ratio in order to practice the method of claim 14.

One of ordinary skill in the art would have been motivated to utilize said ratio because the ratio is simply an amount of solid to add to a liquid, with no concentration requirements. The only requirement is that the solution is capable of being stirred after the addition. One of ordinary skill in the art would have known to add enough solid carrier to react with the amount of silver in the silver solution and to have the silver solution at a concentration dilute enough, that is comprising enough liquid, so that the addition of the solid carrier still rendered the solution capable of being stirred and fluid enough as to not hinder the ion exchange process. Further, Ohsumi et al. teach that said solutions are mixed as a slurry, which reads on a pulp. Therefore it would have been obvious to utilize the claimed ratio in order to promote ion exchange.

Regarding claim 15, it would have been obvious to one of ordinary skill in the art at the time the claimed invention was made to produce the antibacterial silver compounds of Ohsumi et al., by dissolving silver peroxide in an acid, as taught by Antelman in order to practice the invention of instant claim 15. It also would have been obvious to utilize nitric acid as taught by Ohsumi et al.

One of ordinary skill in the art would have been motivated to do this because Antelman teaches a known method for producing a solution with bivalent silver ions.

Therefore it would have been obvious to utilize the bivalent silver ion solution production method of Antelman, with the antibacterial production methods of Ohsumi et al. in order to produce a more active antibacterial product.

Regarding claim 18, it would have been obvious to one of ordinary skill in the art at the time the claimed invention was made to wash the product material until a pH of 5-6 was reached and to dry said product material for 1-2 hours.

One of ordinary skill in the art would have been motivated to wash the product material until a pH of 5-6 was reached because Ohsumi et al. teach that the product is sufficiently washed. Since the product material of Ohsumi et al. and the filter cake of the instant invention are the same the materials would necessarily have the same pH after filtering and washing said materials. The office does not have the facilities to test that both materials would have the same pH and it is therefore incumbent upon the applicant to show that the materials do have a different pH. Therefore it would have been obvious to wash the filter material till a pH of 5-6 is reached.

One of ordinary skill in the art would have been motivated to dry the product material for 1-2 hours because Ohsumi et al. teach that the product material is dried for 12 hours at 110 degrees. The term "dried" is read as essentially all liquid being removed. One of ordinary skill in the art would have understood what the term dry means and be able to determine the appropriate amount of time to expose said product material to a temperature of 110 degrees in order to dry said product. Therefore it would have been obvious to dry the product material for 1-2 hours.

Regarding claim 19, it would have been obvious to one of ordinary skill in the art at the time the claimed invention was made to grinding said product to a particle size of 1-2 microns.

One of ordinary skill in the art would have been motivated to grind the product to said size because Ohsumi et al. teach that the products can be in powder form and also teach a specific particle size between 1 and 2 microns for the zeolite example. Therefore it would have been obvious to grind any of the product examples down to a size of 1-2 microns in order to produce a powder with acceptable particle sizes.

From the teachings of the reference, it is apparent that one of ordinary skill in the art would have had a reasonable expectation of success in producing the claimed invention. Therefore, the invention as a whole would have been prima facie obvious to one of ordinary skill in the art at the time the invention was made, as evidenced by the references, especially in the absence of evidence to the contrary.

Response to Arguments

Applicant's arguments filed 10/29/2008 have been fully considered but they are not persuasive.

Applicant argues that no reference teaches the claimed ratio of 1:6 to 1:10 for said solid carrier and said solution.

This argument is not found persuasive because this is nothing more than a stating how much solid is added to how much liquid to form a slurry. Applicant does not give any concentration values for the silver within said solution nor does applicant give

any percentage value for the amount of silver found within the dried product. By utilizing the teachings of the prior art of producing a slurry and simply altering the volume of liquid will not materially effect the final product, the only effect will be that in a large volume the ion exchange process may take longer than in a lesser volume. Applicant has shown no result effect of having a specific volume to volume ratio and unless applicant can show that alteration of said ratio materially effects the final product, no weight will be given to said limitation.

Applicant also argues that the examiner has fallen victim to the insidious hindsight analysis syndrome and that the prior art does not teach the limitations as claimed.

This argument is not found persuasive because the combination of the prior art teaches producing the same products that the claimed method produces and the combination of the prior art teaches all of the steps of the claimed methods and makes obvious the combination of said steps into a single process in order to produce said products. Applicant has also failed to point out what specific limitations are not met and how the combinations of said process steps are not obvious. The examiner has clearly shown how each piece of art teaches the claimed limitations and how any limitations not taught are cured through the teachings of analogous art. Applicant's arguments, with no specificity, are in no way persuasive.

Conclusion

No claims are allowed.

Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire **THREE MONTHS** from the mailing date of this action. In the event a first reply is filed within **TWO MONTHS** of the mailing date of this final action and the advisory action is not mailed until after the end of the **THREE-MONTH** shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than **SIX MONTHS** from the date of this final action.

Inquiries

Any inquiry concerning this communication or earlier communications from the examiner should be directed to **LUKE E. KARPINSKI** whose telephone number is (571)270-3501. The examiner can normally be reached on Monday Friday 9-5 est.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Johann R. Richter can be reached on 571-272-0646. The fax phone

number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

LEK

/Mina Haghighatian/
Primary Examiner, Art Unit 1616